ENVIRONMENTAL RESEARCH
LETTERS

LETTER • OPEN ACCESS

Corrigendum: Every drop matters: combining population-based and satellite data to investigate the link between lifetime rainfall exposure and chronic undernutrition in children under five years in rural Burkina Faso (2022 *Environ. Res. Lett.* 17 054027)

To cite this article: Edmund Yeboah *et al* 2022 *Environ. Res. Lett.* **17** 094006

View the article online for updates and enhancements.

You may also like

- Universal access to electricity in Burkina Faso: scaling-up renewable energy technologies
M Moner-Girona, K Bódis, T Huld et al.
- Grid-connected photovoltaic (PV) systems with batteries storage as solution to electrical grid outages in Burkina Faso
D Abdoulaye, Z Koalaga and F Zougmore
- 1st International Symposium on Electrical Arc and Thermal Plasmas in Africa (ISAPA)
Pascal Andre and Zacharie Koalaga

This content was downloaded from IP address 194.80.229.244 on 05/12/2022 at 13:50

ENVIRONMENTAL RESEARCH
LETTERS

CORRIGENDUM

Corrigendum: Every drop matters: combining population-based and satellite data to investigate the link between lifetime rainfall exposure and chronic undernutrition in children under five years in rural Burkina Faso (2022 *Environ. Res. Lett.* **17** 054027)

Edmund Yeboah[1,*], Naasegnibe Kuunibe[2], Isabel Mank[1], Diletta Parisi[1], Emmanuel Bonnet[3], Julia Lohmann[1,4], Saidou Hamadou[5], Bernadette T Picbougoum[6], Kristine Belesova[7], Rainer Sauerborn[1], Till Baernighausen[1], Ina Danquah[1,8] and Manuela De Allegri[1,8]

[1] Heidelberg Institute of Global Health (HIGH), Medical Faculty and University Hospital, Heidelberg University, Heidelberg, Germany
[2] Simon Diedong Dombo University of Business and Integrated Development Studies, Wa, Ghana
[3] Institute for Research on Sustainable Development—IRD, UMR 215 Prodig, 5, cours des Humanités, F-93 322 Aubervilliers Cedex, France
[4] London School of Hygiene and Tropical Medicine, London, United Kingdom
[5] The World Bank, 1818 H Street, NW Washington, DC 20433, United States of America
[6] Institut National de Santé Publique (INSP)/Centre MURAZ, Centre MURAZ, 2054, Avenue Mamadou Konate, 01 B.P. 390 Bobo-Dioulasso 01, Burkina Faso
[7] Department of Public Health, Environments and Society and Centre on Climate Change and Planetary Health, London School of Hygiene and Tropical Medicine, 15–17 Tavistock Pl, London WC1H 9SH, United Kingdom
[8] Equal contribution of last authors.
[*] Author to whom any correspondence should be addressed.

E-mail: edmund.yeboah@uni-heidelberg.de

OPEN ACCESS

RECEIVED
27 July 2022

ACCEPTED FOR PUBLICATION
28 July 2022

PUBLISHED
18 August 2022

Original content from this work may be used under the terms of the Creative Commons Attribution 4.0 licence.

Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

There was a mix-up in the discussion section of the paper- paragraphs three and four. The age-stratified discussion begins with the sex-stratified topical sentence and vice versa.

The Corrected Version is:

Second, the nutritional status of children below two years was more likely to be negatively affected by ALE than those aged two or above. This observation can be explained in many plausible ways. The first explanation is that younger children are more vulnerable to rainfall shocks [43], possibly due to weaker immune responses [55] that predispose them to rainfall-related disease effects, which further inhibit dietary intake and nutrient absorption [53]. This is backed by evidence indicating that the most vulnerable period with devastating rainfall effects is between the prenatal and first year after birth [43]. Concerning dietary intake, younger children have higher nutritional needs than older children, making them prone to inadequate dietary supply related to crop failure due to extreme rainfall [52]. Another explanation is catch-up growth. Compared to younger children, older children exposed to different rainfall seasons might experience a counteracting effect; the positive rainfall effect(s) overrides the negative effect(s), resulting in a net positive nutritional effect at the time of measurement. Evidence suggests that children can recover from bad nutritional outcomes related to rainfall in earlier periods [48]. Another plausible explanation for the difference in effects between younger and older children is selective mortality in children. Most child mortality occurs in children under 12 months (around 53% globally and 94% in Burkina Faso in 2020), implying vulnerable children die before 12 months [56]. Thus, the pool of older children might be those better fit to survive despite adverse circumstances, including variations in rainfall quantities.

Third, the negative association persisted when we stratified our model by sex, with slight differences between sexes. Some studies suggest that in cultures with a preference for one sex over the other, gender discrimination in intra-household resource allocation may account for the differences in child response to adverse rainfall effects [57, 58]. We found that girls had a less negative impact compared to boys. However, the difference is almost negligible, tending to support evidence from earlier studies [59, 60] showing no gender-based discrimination in intra-household resource allocation in Burkina Faso. Meanwhile, another study in Burkina Faso observed that boys are more affected by adverse rainfall effects

© 2022 The Author(s). Published by IOP Publishing Ltd

in the prenatal period, attributing their finding to the vulnerability of boys in early life [43]. We recommend further research on the differences in child response to climate effects and the possible influence of gender norms, particularly relating to household resource allocation.

ORCID iDs

Edmund Yeboah https://orcid.org/0000-0002-4976-3856
Isabel Mank https://orcid.org/0000-0003-1321-1731